Docket No.: 203384US

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF: :

Shunji NATSUKA et al. : GROUP ART UNIT: 1644

SERIAL NO: 09/784,077 : EXAMINER: P. NOLAN

FILED: FEBRUARY 16, 2001 :

FOR: MURINE ALPHA (1,3) FUCOSYLTRANSFERASE FUC-TVII, DNA ENCODING THE SAME, METHOD FOR PREPARING THE SAME, ANTIBODIES RECOGNIZING THE SAME, IMMUNOASSAYS FOR DETECTING THE SAME, PLASMIDS CONTAINING SUCH DNA, AND CELLS CONTAINING SUCH A PLASMID

DECLARATION UNDER 37 C.F.R. §1.131

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

SIR:

Now comes Shunji Natsuka, Kevin M. Gersten, and John B. Lowe who depose and state that:

1. We are the inventors of the subject matter claimed in the above-identified application.

2. Claim 17 of the above-identified application is directed to an isolated sequence of DNA which encodes a polypeptide having an amino acid sequence which comprises an amino acid subsequence, said amino acid subsequence being selected from the group consisting of:

(a) the amino acid sequence encoded by the DNA sequence corresponding to from position 996 to 1149 and 2067 to 3079 of SEQ ID NO: 1; and

(b) the amino acid sequence encoded by the DNA sequence corresponding to from position 1947 to 1959 and 2067 to 3079 of SEQ ID NO: 1.

3. Claim 20 of the above-identified application is directed to a plasmid, comprising a sequence of DNA which encodes a polypeptide having an amino acid sequence which comprises an amino acid subsequence, said amino acid subsequence being selected from the group consisting of:

(a) the amino acid sequence encoded by the DNA sequence corresponding to from position 996 to 1149 and 2067 to 3079 of SEQ ID NO: 1; and

(b) the amino acid sequence encoded by the DNA sequence corresponding to from position 1947 to 1959 and 2067 to 3079 of SEQ ID NO: 1.

4. Claim 23 of the above-identified application is directed to a transformed cell, which comprises a plasmid comprising a sequence of DNA which encodes a polypeptide having an amino acid sequence which comprises an amino acid subsequence, said amino acid subsequence being selected from the group consisting of:

(a) the amino acid sequence encoded by the DNA sequence corresponding to from position 996 to 1149 and 2067 to 3079 of SEQ ID NO: 1; and

(b) the amino acid sequence encoded by the DNA sequence corresponding to from position 1947 to 1959 and 2067 to 3079 of SEQ ID NO: 1.

5. Claim 26 of the above-identified application is directed to a method for producing a polypeptide, comprising culturing a transformed cell, which comprises a plasmid comprising a sequence of DNA which encodes a polypeptide having an amino acid sequence which comprises an amino acid subsequence, said amino acid subsequence being selected from the group consisting of:

(a) the amino acid sequence encoded by the DNA sequence corresponding to from position 996 to 1149 and 2067 to 3079 of SEQ ID NO: 1; and

(b) the amino acid sequence encoded by the DNA sequence corresponding to from position 1947 to 1959 and 2067 to 3079 of SEQ ID NO: 1.

6. The DNA sequence shown in SEQ ID NO: 1 of the above-identified application was cloned, sequenced, and expressed under our supervision and control, prior to June 7, 1995.

7. Exhibit 1 attached hereto is a copy of the first (page 63) and the last page (page 73) of a notebook of Dr. Robert Kelly, a laboratory technician who worked under our supervision and control, which describe the cloning of the DNA sequence shown in SEQ ID NO: 1 of the above-identified application.

8. Exhibit 2 attached hereto is a computer printout prepared by Dr. Kelly which is a final compilation of the DNA sequence.

9. The DNA sequence shown in Exhibit 2 contains

(A) the DNA sequence corresponding to from position 996 to 1149 and 2067 to 3079 of SEQ ID NO: 1 of the present application, and

(B) the DNA sequence corresponding to from position 1947 to 1959 and 2067 to 3079 of SEQ ID NO: 1 of the above-identified application.

10. Exhibit 3 attached hereto is a copy of pages 63-67 from a notebook of Dr. Kelly. The experiments described therein demonstrate that a cDNA containing the sequence shown in SEQ ID NO: 1 of the above-identified application expressed the polypeptide encoded by the cDNA.

11. Exhibit 4 attached hereto is a copy of flow cytometry profiles of COS cells transfected with each of the variants of the mouse fucosyltransferase VII cDNAs that we had cloned.

12. As we reported in *The Journal of Biological Chemistry*, Vol. 271, No. 14, pp. 8250-8259, 1996, some of these cDNAs were active in making the sialyl Lewis x cell surface antigen (SLEX), which is the fucosylated glycan product of mouse FucT-VII. See page 8251, column 2, to page 8252, column 2, and the paragraph bridging columns 1 and 2 at page 8255. These data demonstrate that the DNA shown in SEQ ID NO: 1 of the present application directed expression of the enzyme protein thereby in a transformed cell. The term "transformed" in this case means a cell into which the Fuc-TVII cDNA has been introduced by transformation/transfection.

13. A copy of *The Journal of Biological Chemistry*, Vol. 271, No. 14, pp. 8250-8259, 1996 is attached hereto as Exhibit 5.

14. The dates on the pages attached as Exhibits 1-4 have been redacted. Based on our first-hand knowledge of the experiments described in those Exhibits, we confirm that the experiments were completed on or before June 7, 1995.

15. Based on our first-hand knowledge of the experiments described in Exhibits 1-3, we confirm that those experiments were conducted in the United States.

16. The undersigned petitioner declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

17. Further deponent saith not.

[signature]

Shunji Natsuka

9-13-02

Date

[signature]

Kevin M. Gersten

9/16/02

Date

[signature]

John B. Lowe

9-12-02

Date

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